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A NEW SMUT ON *SORGHUM HALEPENSE* NEES.

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(*Plate* 19.)

Towards the latter part of February, 1915, Mr. J. M. Sim, of Maritzburg, Natal, sent me for identification a smut on the common Johnson grass (*Sorghum halepense* Nees) of Natal.

On examination the smut proved to be an undescribed species of *Sorosporium,* and I propose to describe it as *Sorosporium Simii* Pole Evans, n.sp.

The description is as follows:—

Sori attacking and destroying the entire inflorescence while still enclosed in the sheathing blade, elongated up to 5-7 cm. long and 1-2 cm. broad, black, becoming powdery, covered at first with a rather thick white or isabelline membrane; spore balls subglobose or ellipsoid, black, 60-150 μ diam.; spores globose or subglobose, olivaceous or olivaceous-brownish, very delicately echinulate, 12-13 μ diam.

On *Andropogon halepensis* Brot., var. *effusus* Stapf., Maritzburg, Natal, February 23rd, 1915.

Sorosporium Simii.—Soris inflorescentiis evolutis easque omnino destruentibus, partim vagina foliari inclusis, elongatis usque ad 5-7 cm. longis et 1-2 cm. latis, atris, pulverulentis, membrana albida vel isabellina crassiuscule primo tectis; glomerulis subglobosis vel ellipsoideis, atris 60-150 μ diam.; sporis globosis vel subglobosis olivaceis vel olivaceo-brunneis, tenuissime echinulatis, 12-13 μ diam.

Hab. in inflorescentia *Andropogonis halepensis* Brot., var. *effusi* Stapf., leg. J. M. Sim, Maritzburg, Natal, February 23rd, 1915.

This grass is now referred to the genus *Sorghum,* and is known botanically as *Sorghum halepense* Nees. It closely resembles the grass known as Soudan grass (*Andropogon sorghum sudanensis* Piper) in habit of growth, in foliage and seed, but is a perennial, whereas Soudan grass is an annual.

Soudan grass, which is a native of Tropical North Africa, has recently been attracting a lot of attention in America and this country as a hay grass, and should it justify its cultivation on a large scale, as it at present gives every promise of doing, the parasites that occur on Johnson grass should be taken into consideration.

The object of this note is therefore to draw attention to the fact that a dangerous smut occurs naturally on Johnson grass in South Africa, and in the opinion of the writer it seems highly

probable that this smut may attack Soudan grass unless due precautions are taken.

An opportunity of definitely testing the effect of *Sorosporium Simii* on Soudan grass has not yet arisen, but it is hoped that experiments in this dnrection may be undertaken during the next season.

The mere fact that Johnson grass is a perennial suggests that infection may not be confined to the seedling plant, but that the fungus may be able to infect the fully-grown plant, as is the case with several other members of the Gramineæ.

Explanation of Plate.

Photograph of three inflorescences of *Andropogon halepensis* Brot., var. *effusus* Stapf., destroyed by smut, *Sorosporium Simii* Pole Evans.

I. B. Pole Evans.—Smut on Sorghum Halepense.